

Interview Summary

During the interview, November 19, 2009, the elements discussed were the 112 6th paragraph rejection, the Yamamoto rejection, and the specification of the instant application and how it relates to the invoked 112 6th claim limitations.

The 112 6th rejections to claim 1 with regard to the discharge means is maintained.

The 112 6th rejections regarding all limitations related to “means for” have properly invoked 112 6th. It is the applicant’s intent to invoke 112 6th.

Claim 1 comprises the following elements: A discharge means, abnormality detection means, and change means.

Discharge means:

The instant application does not specifically state “The discharge means are” and therefore an inspection of the specifications has led the examiner to interpret the discharge means as element 14 wherein hydrogen and oxygen are diluted and then further discharged.

Yamamoto teaches element 44 wherein hydrogen and oxygen are mixed and diluted then discharged through an exhaust element [Figure 8].

Abnormality detection means:

The instant application teaches that the abnormal state is when a p3 after the purge valve is lower than a p2 on the primary side. The instant application describes "abnormality state" as being when the valve is open.

Furthermore, when the difference between the pressure detected by the primary side pressure sensor p2 and the pressure detected by the secondary side pressure sensor p3 is less than the prescribed value, the hydrogen off-gas apparently flows through the purge valve SV5. Therefore, the purge valve SV5 can be detected to be in an abnormal state.

Yamamoto teaches a control system to open and close a bypass valve in order to regulate the concentration of gas being expelled to the atmosphere to below 4% [Paragraph 78-80]. In the case an abnormality such as the purge valve connecting to fuel purge line 43 (analogous to SV5) being open, or leaking, the concentration of hydrogen to the discharge fuel diluter would increase thereby activating the controller to open bypass valve 46 to increase oxygen flow.

Change Means:

The instant application teaches the change means to be a bypass valve to increase oxygen when concentration of hydrogen to the diluter is higher than expected [Paragraph 5].

Yamamoto teaches a bypass valve (46) to increase oxidant gas to the diluter [Figure 8].

112 6th Limitations:

The applicant has chosen to enact 112 6th subjecting the claims to an evaluation of indicia of equivalence. The examiner maintains that the prior art of Yamamoto teaches an indicia of equivalence since the function-way-result is shown. Yamamoto teaches the function being a controller to regulate the oxygen amount, the way via a bypass valve, and the same result being a concentration lowering of hydrogen gas being purged to the atmosphere [Instant application 5]. The examiner has shown that the prior art acts as described in the applicant's specification and has concluded that the prior art anticipates the means-plus-function limitations.

Art Unit: 1795

The examiner also maintains that the intended use of the prior art structure is capable of performing the intended use of correcting the system error resulting in too high of a hydrogen concentration being purged to the atmosphere due to an internal problem.